

REMARKS

Claims 1-9, 11, 13-21, 28, 29, 31-33, 35-36, 38-40, 42-55, and 58-77 were pending as of the action mailed on September 7, 2007. Claims 1, 7, 11, 15, 19, 28-29, 31-33, 35-36, and 38-40 are in independent form.

Claims 7-9, 14, 19-21, 29, 33, 36, 40, 47-48, 50, 54-55, 58-61, 67-68, 70, and 74-77 are being canceled. Claims 1-6, 11, 15, 28, 31-32, 35, 38-39, 42-46, and 62-66 are being amended. No new matter has been added. Support for the amendments can be found in the specification, for example, in Figures 1A-1C, in Figure 3, on page 6, lines 7-14, on page 8, lines 3-16, and on page 9, lines 1-10.

Reconsideration and allowance of the above-referenced application are respectfully requested in light of the following remarks.

Interview Summary

The applicant wishes to thank Examiner Anya for the courtesy of the telephonic interview with the applicant's undersigned representative on January 4, 2008.

The substance of the interview included a discussion of proposed claim amendments to claim 1. The applicant explained the proposed claim amendments with reference to Figure 1C of the specification, and the examiner suggested further amendments to provide antecedent basis for the claim terms. No agreement was reached as to the sufficiency of any particular claim language or of the allowability of any claim that might be submitted.

Section 103 Rejections

Claims 1-9, 11, 13-18, 28-29, 31-32, 35-36, 38-39, and 42-53 are rejected under 35 U.S.C. § 103(a) for allegedly being unpatentable over U.S. Patent No. 5,929,864 ("Picott") in view of U.S. Patent No. 5,404,428 ("Wu").

Claim 1. Claim 1, as amended, recites in a computer program, a method for managing dependencies among a first set of objects each having a value. The first set of objects includes a first object and one or more second objects depending directly or indirectly on the first object, where the one or more second objects include at least one observer-only second object. When the value of the first object changes, the method invalidates the one or more second objects,

including severing dependencies among the one or more second objects. The value of each second object is only recomputed when the respective second object is queried for a value. The method causes each invalidated observer-only second object to recompute its value by querying the values of a second set of objects from which the observer-only second object depends. Querying the values of the second set of objects causes invalidated objects in the second set of objects to be recomputed using one or more requester objects, where each requester object operates to request an object's value so that the requested value cannot change until the requester terminates, at which time all objects whose values were requested by the requester object are released.

Claim 1, as amended, incorporates the feature of canceled claim 14. In particular, claim 1 recites that "invalidated objects in the second set of objects [are] recomputed using one or more requester objects, each requester object operating to request an object's value so that the requested value cannot change until the requester terminates, at which time all objects whose values were requested by the requester object are released."

The examiner rejected claim 14 applying Wu as follows:

As to claim 14, Wu teaches . . . using a requester object to make the transaction consistent ("...request..." Col. 9 Ln. 8 - 10), the requester object operating to request an object's value so that the requested value cannot change until the requester terminates, at which time all objects whose values were requested by the requester object are released ("...evaluated lazily..." Col. 8 Ln. 22-26, Col. 8 Ln. 24-26, "...invalidated...No calculation..." Col. 9 Ln. 1 -10).

The applicant respectfully disagrees. The passages of Wu cited by the examiner, which are set forth below, do not disclose or suggest a requester object operating to request an object's value so that the requested value cannot change until the requester terminates (*emphasis added*):

For example, if the application changes the VDC window using a function object_set() to set a context variable CTX_VDC_WINDOW, a number of derived items that are dependent on the value of the VDC window become invalid. But, because the changes are evaluated lazily, the derived data items are not recalculated until the pipeline requests the items. (Wu, col. 8, lines 20-26)

... Each derived item declined in the system in implemented embodiments contains references, in the form of direct function calls for evaluating other items which have validity flags. In this way, when a view model attribute is modified by the application program, derived items dependent upon that attribute change, are invalidated during the change. No calculations are performed at the time of an attribute change. Once the device pipeline requests one of the invalid derived items, then the calculations may be performed.... (Wu, col. 9, lines 1-10)

Wu teaches that derived items dependent on a changed value become invalid. An invalid derived item is not updated until a pipeline requests the invalid derived item. Once the pipeline requests the invalid derived item, the values upon which the derived item depends are evaluated without limitation. Wu's lazy update of an invalid derived item is not understood to prevent the values requested by the updating derived item from changing. In contrast, an invalidated object of claim 1 is recomputed using one or more requester objects, where each requester object operates to request an object's value so that the requested value cannot change until the requester terminates. Once the requester terminates, all objects whose values were requested by the requester object are released. Thus, the portions of Wu relied upon by the examiner do not disclose this feature of claim 1. The primary reference Picott is not cited for disclosing the claimed requester object.

Because neither Picott nor Wu, alone or in combination, teach or disclose all the limitations of claim 1, claim 1 and its dependent claims are in condition for allowance. Independent claims 28 and 35 include limitations corresponding to those of claim 1 and were rejected for the same reasons. Claims 28 and 35 and their respective dependent claims are therefore in condition for allowance for at least the same reason as claim 1.

Claim 11. Claim 11, as amended, recites "leaf object synchronization [that] includes using a requester object to make [a] transaction consistent, the requester object operating to request an object's value so that the requested value cannot change until the requester terminates, at which time all objects whose values were requested by the requester object are released."

As addressed above with respect to claim 1, neither Picott nor Wu, alone or in combination, teach or suggest a requester object operating to request an object's value so that the requested value cannot change until the requester terminates. Because the examiner has failed to find all the limitations of claim 11 in the prior art, the rejection of claim 11 should be withdrawn,

and claim 11 and its dependent claims should be allowed. Independent claims 31 and 38 include limitations corresponding to those of claim 11 and were rejected for the same reasons. Claims 31 and 38 and their respective dependent claims are therefore in condition for allowance for at least the same reason as claim 11.

Claim 15. Claim 15, as amended, recites that “the values for objects marked as dirty are recomputed using one or more requester objects, each requester object operating to request an object's value so that the requested value cannot change until the requester terminates, at which time all objects whose values were requested by the requester object are released.”

As addressed above with respect to claim 1, neither Picott nor Wu, alone or in combination, teach or suggest a requester object operating to request an object's value so that the requested value cannot change until the requester terminates. Because the examiner has failed to find all the limitations of claim 15 in the prior art, claim 15 and its dependent claims are in condition for allowance. Independent claims 32 and 39 include limitations corresponding to those of claim 15 and were rejected for the same reasons. Claims 32 and 39 and their respective dependent claims are therefore in condition for allowance for at least the same reason as claim 15.

Claims 19-21, 33, 40, 54-55, and 74-75 are rejected under 35 U.S.C. § 103(a) for allegedly being unpatentable over Wu in view of U.S. Patent No. 5,526,475 (“Razdow”).

Claims 19-21, 33, 40, 54-55, and 74-75. The applicant canceled without prejudice claims 19-21, 33, 40, 54-55, and 74-75.

Claims 58-59 and 76-77 are rejected under 35 U.S.C. § 103(a) for allegedly being unpatentable over Wu in view of Razdow as applied to claim 19 above, and further in view of U.S. Patent No. 5,815,415 (“Bentley”).

Claims 58-59 and 76-77. The applicant canceled without prejudice claims 58-59 and 76-77.

Conclusion

For the foregoing reasons, the applicant submits that all the claims are in condition for allowance.

By responding in the foregoing remarks only to particular positions taken by the examiner, the applicant does not acquiesce with other positions that have not been explicitly addressed. In addition, the applicant's selecting some particular arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist. Finally, the applicant's decision to amend or cancel any claim should not be understood as implying that the applicant agrees with any positions taken by the examiner with respect to that claim or other claims.

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Respectfully submitted,

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